







Day One of the EMS Basin Study Stakeholder Consultation Series

Our Path Today

:15	Welcome, Aims & Overview
:30	Context
:10	Brainstorm Adaptation & Mitigation Actions
:60	Small Groups: Common Strategies
:30	Whole Group: Identify Arenas of Strategies
:15	Next Steps & Close





Today's Objectives

Ground ourselves in the aims of the EMS Basin Study Stakeholder team

Identify adaptation and mitigation actions and strategies to address water challenges

Group strategies into broader strategic arenas, and identify teams to dive deeper into strategies on Day 2

Tomorrow's Objectives

Refine the strategies within the strategic arenas

Analyze the strategies to provide a better understanding of the options

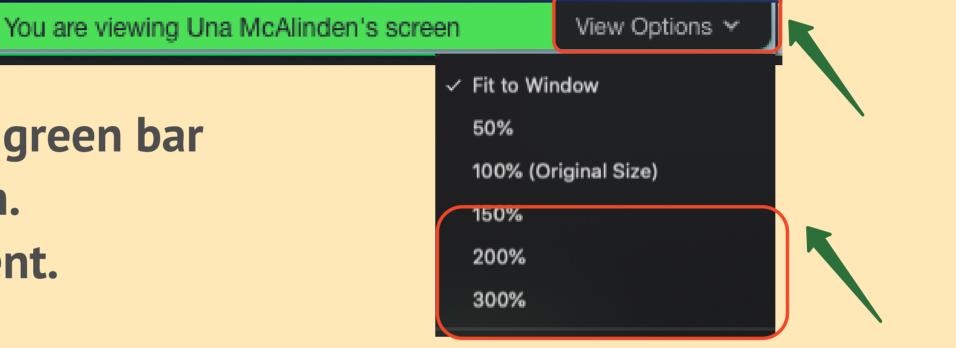
Explore next steps

How We'll Work Together

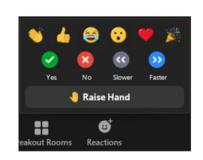
Zoom Screen Share

At the top of your Zoom screen, find the green bar and select the "View Options" dropdown.

Then click on your preferred zoom percent.



How to Participate



Raise your hand - on camera by using the 'reactions' feature in zoom or by unmuting.



We will occasionally call on people to ensure multiple voices are heard.



Consider this an invitation, not an obligation!

In Small Groups

You will be assigned a facilitator form the team to help lead the conversation and scribe your ideas in the Miro Board while screen sharing.

Facilitation Team



Alisa Oyler Facilitator Phoenix, Az



Oscar Walters-Duran Facilitator, Planner SF Bay Area



Courtney Lonergan Facilitator & Trainer Phoenix, Az



Shelby Pierce
Facilitator & Online
meeting Producer
Sioux City, IA



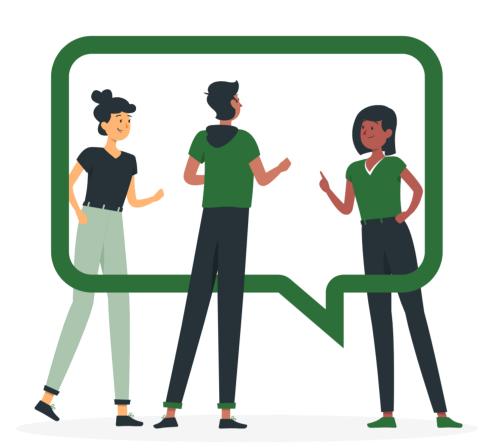
Eileen Pippins
OD Consultant
Oakland, CA



Rachael Mizuno Non-Profit Professional Chicago, IL

Quick Group Check-In





Introduce yourself and discuss the questions below. Share one hope for the session in the chat when you return.

How do YOU define mitigation vs adaptation?

What are your hopes for today's session?

Hopes for today?

Strategies to move forward, thoughtful ideas to analyze

Innovative, but practical long-term and sustainable strategies

Solutions that the Pinal communities can use to develop sustainable future

Practical, actionable solutions

hope to get a sense from participants what adaptation/mitigation means for development in this region

Capture ALL ideas even those that seem not immediately practical

Consensus on three strategies

Context Setting Presentation

Framing the Challenges: A Review and Discussion of Groundwater Modeling Results

Mitigation and Adaptation Brainstorming – Day 1 5/17/21





What specific actions can we take to adapt or mitigate water challenges in our region?

Silently brainstorm your own answers.

Try to list at least 10 specific, concrete actions that we could take individually or together.



Just before we return, identify your

3 most impactful and realistic actions to pursue.

- Example: Provide incentives to reduce pumping when water levels reach 900 ft
- Reduce the level of involuntary fallowing
 - Example: Substitute high water use crops (e.g. Alfalfa) with low water use crops (e.g. Guayule) so more acres stay in production

Examples of **Adaptation**:

- Decouple the municipal sector from the regional groundwater system
 - Example: Construct a CAP surface water treatment, reducing the reliance on groundwater to demonstrate an Assured Water Supply

What specific actions can we take to adapt or mitigate water challenges in our region?

- Increased potential for subsidence
- Increased pumping costs
- Lower water quality
- Difficulty in using groundwater for demonstrating an Assured Water Supply
- Challenges in recovering stored water
- Insufficient pumping to meet agricultural demands (involuntary fallowing)



Use paper and pen or open a blank document on your computer.

Brainstor

Brainstorm 10
answers, then
pick your top 3!

Consider....

WATER

- Augmentation
- Conjunctive use
- Conservation and efficiency
- Desalination
- Long term storage
- Recovery of stored supplies
- Recycling and reuse

MANAGEMENT

- Collaborative opportunities
- Demand management
- Land fallowing and retirement
- Operational changes
- Urban runoff management
- Vegetation management
- Weather modification
- Wheeling agreements

INFRASTRUCTURE

- Desalination
- Importation projects
- New conveyance and storage facilities
- Groundwater recharge facilities
- Rehabilitation or replacement of existing facilities

LEGAL AND INSTITUTIONAL

- Legal and institutional changes
- Legislative changes
- Policy changes

ECONOMICS

- Mitigation Scenarios
- Social
- Ecosystem Services
- Market and non-market water values

What specific actions can we take to adapt or mitigate water challenges in our region?



Find your workgroup

- In a moment, you will move into breakout rooms.
- You will have a designated facilitator to lead you through the conversation
- They will will share screen and scribe into your workspace.
- Be ready to share the top 3 adaptation / mitigation actions from your list.

Group 1

Group 2

Group 3

Group 4

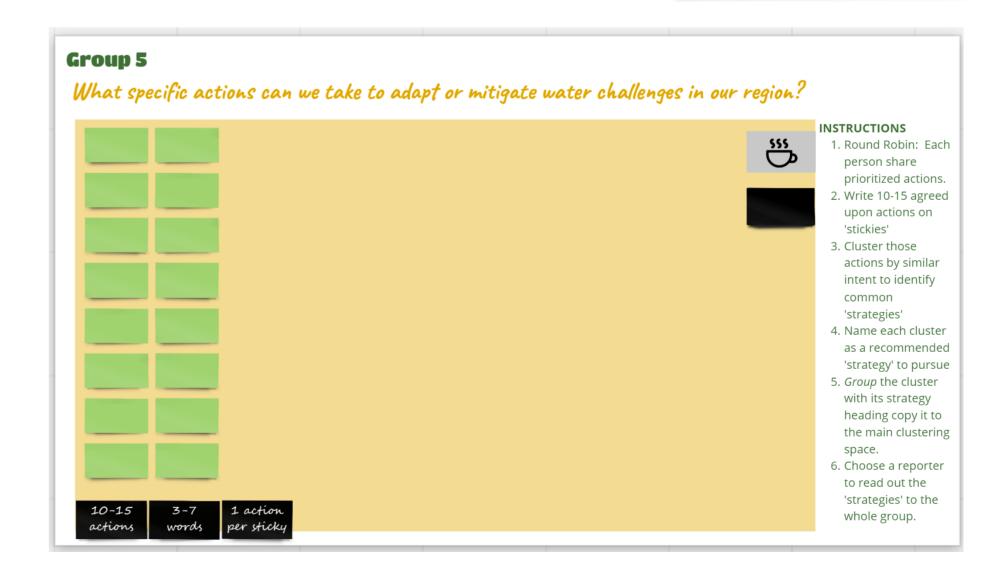
Group 5

Group 6

50 minutes!

INSTRUCTIONS FOR SMALL GROUPS

- 1. Round Robin: Each person introduce themselves and **share prioritized actions**.
- 2. As a group, discuss your ideas to **clarify**, enrich and deepen your thinking together
- 3. Write **10-15 agreed upon actions** on individual 'stickies' in 3 to 7 words
- 4. **Cluster** those actions by similar intent to identify common 'strategies'
- 5. Name each column as a recommended 'strategy' to pursue
- 6. Group the cluster with its strategy to copy it to the main clustering space.
- 7. Choose a reporter ready to read out the 'strategies' to the whole group.



Group 1 - Nathan M., Jake, Tom, Fred S. Anthony S.

What specific actions can we take to adapt or mitigate water challenges in our region?

Use adaptation to reduce agricultural demands for groundwater

Removing tax incentives for farming

Voluntary compensated fallowing that works for farmers and landowners alike.

Legislative changes to incentivize ag lands for conversion for other purposes

With agriculture improve irrigation
efficiency through
replacing flood irrigation
with sprinklers

Focused agriculture in areas with more prodcutive soils

More Sustainable Policies for Water Management

Update this study on 10 year cycle to stay current

Requirements for golf courses to change their sources of reclaimed water

Rezone or limit development in high subsidence areas

Build Assured
Water Supply
Models within the
limits

Price water for what it means to us to save up for the future

Reducing ground water pumping through conservation

Create rules and ordinances for commercial and HOA routine maintenance and lower water use

Developing conservation goals

Modify city & county plans and requirements (ordinances) - promoting xeriscaping

Evaporation
management convert open
channels to pipelines

Augmenting Water Supplies

Build infrastructure for aquifer recharge

Regional entity to acquire, store at GSF, and share NIA priority CAP water

Harnessing
Mississippi flood
water to the
Colorado base

To create high functioning mechanisms to functionally import or augment water supplies

Build Infrastructure for our/water future

incentivizing direct treatment and delivery by water providers

Harnessing
Mississippi flood
water to the
Colorado base

Build infrastructure for aquifer recharge

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- 5. *Group* the columns with their strategy heading & COPY to the main clustering space.
- 6. Be ready to answer clarifying questions from the whole group.

Group 2- Terri Sue Rossi, Abe Springer, Deborah Tosline, Brad Hill, Lonnie Frost, Darrell Wilson

What specific actions can we take to adapt or mitigate water challenges in our region?

County wide

exterior water

use ordinance.

Work with County

government to financially

incentivize fallowing by

not increasing taxes with

change of use

Discover higher

value, lower

water use crops

Develop regional infrastructure to facilitate the use of sustainable water supplies

Evaluate direct potable reuse for municipal sector

Conduct a regional water treatment plant(s) siting study

Develop targeted recharge facilities in groundwater challenged areas

Modify existing water regulations to be more Pinal AMA compatible

Work with ADWR to change well regulations to allow for more flexible movements of wells to areas with more physically available groundwater

L&I for LID stormwater management and recharge infrastructure for industrial, commercial, and muni.

Get local jurisdictions to adopt LID code

establish regulations for LID or GSI stormwater management practices

Identify & implement demand management options

LID stormwater management and landscape mandates

L&I to mandate stricter landscape watering requirements. ADWR reports on their website that 70% of potable water use is applied to

Develop an agricultural fallowing program that reduces agricultural demands by 100,000 AF per year

landscape. If we reduce water on

landscape we increase drinking

water supplies

Develop a County-wide conservation program that will reduce demands in all sectors to be reduced by a certain percentage

Develop a diverse sustainable water supply portfolio

Conduct a regional water treatment plant(s) siting study

Partner to bring in water being made available (hopefully) by the Colorado River Indian Tribes (CRIT) for lease to Arizona entities

Figure out how to make sure all Pinal AMA CAP Entitlements are used inside the Pinal AMA

Put together a process to exchange reclaimed water for CAP water with irrigation districts to better move water to targeted areas where recharge is needed

Secure remaining NIA P4 CAP water for the Pinal AMA

Better understand options to utilize (spatially & temporally) unused reclaimed water within the AMA

Leverage long-term storage credits stored by the AWBA in excess of what is needed to offset CAP shortages for **CAP M&I entitlements**

Evaluate direct potable reuse for municipal sector

Make sustainable water supplies affordable in the Pinal AMA

Dedicate part or all of the CAWCD water storage tax to fund a renewable water supply for the Pinal AMA

Discover higher value, lower water use crops

Figure out how to make sure all Pinal AMA CAP Entitlements are used inside the Pinal AMA

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Group 3 - Rachael, Austin, Mitch, Aaron, Theresa, John, Heide

What specific actions can we take to adapt or mitigate water challenges in our region?

Find the Money

Regional grant request process

Land Management

Fallowing (in state trust land and other areas)

require that new development occer on exisitng ag land

Effluent Reuse

Grey water for agriculture

Implement direct use by the year 2035

Direct Use of Nonpotable (e.g., Irrigation (turf and non-food crops & Industrial use

Aquifer health Management

Reduce the disconnect between recharge and pumping

and

Capture and store flood waters

Encourage removing/relocating inefficient wells

Groundwater recharge

Municipal water management

Additional incentive programs for Residential Water usage

Set aside Nogrowth areas (for development)

Luxury tax on high-usage activities/areas "Golf Courses"

Smart growth/low impact development

Agricultural Adaptation

Conversion of half the Alfalfa to guayule

Delep new market for lower water use crops

agricultural Water efficiencies/ technologies example; Converting from sprinklers to drip systems

Looking at agriculture and other export as a net loss of water from the region and how to plan for in

New Water Sources: bringing additional supply into the region

Ocean Desalinization

transportation basins and system use agreements

Finalize the tribal water settlement(s) 3 or 4

Import excess flood waters from the Mississippi to the Green River

Cloud seeding

Gila River watershed management

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Group 4 - Craig, Keith, Kevin, Juliet, Shaina

What specific actions can we take to adapt or mitigate water challenges in our region?

invest in infrastructure to maximize existing water resources

advanced ground water treatment brackish and impaired

direct potable re-use give developers a option to cost share in investment DPR

build a recharge and recycling facility for the city's waste water treatment plant

deepen all wells

look at direct potable re-use

make it easier for different entities to share existing infrastructure- canals

optimize storm water

large scale rainwater- direct runoff to existing canals

develop flood control infrastructure that enhances storm water infiltration (recharge)

low impact development

implement regulatory changes

eliminate all analysis in the Pinal county AMA - in ADWR model

provide a certificate of assured water

establish city ordinances that mitigate/require water conservation

importing alternative water supplies

find alternative water supplies specifically desal-Mississippi River

cloud seeding for water to fall where it is needed

seek willing leases who will lease/sell water - wheeling agreements

create a market for AG pumping

reduce/cap agricultural use

set up a water market for agricultural users-

research new technologies

technologies for water supply- air to water generation/solar power

change the crops to

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INSTRUCTIONS

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invest in new

changing the crops encouraging and incentivizing farmers to utilize more water efficient crops

reduce the crop/water

requirement

Group 5 - Ben Paras, George Fletcher, Ken Seasholes, Valerie Swick

harvesting by

incorporating into

local building codes

What specific actions can we take to adapt or mitigate water challenges in our region?

Retirement Ag Pumping ID new Recharge Water Ag Conservation of ag lands Reduction water facilities preservation Reuse Incentives for new Develop process Require CAGRD to Drill more ag Require lease ag fallowing residential Greater municipal replenish at the for wheeling retirement of Ag wells to reduce credits to reduce development to recycling of water point where water land for an AWS agreements age pumping fallowing reduce water use is pumped incentivize switch Allow CAGRD to More regional Maximize multiple Treatment plant to Incentives to Direct from high water purchase and retire uses of same water utilize impaired minimize high groundwater usage crops to lower ag lands to potable reuse in industry ground waters storage facilities ag pumping areas replenish usage crops offer land require highly Create wastewater Locate water efficient water swaps to plant that sends to import Protection of reused water out use for industry relocate ag stored water Stormwater capture Eliminate 4' decline criterion Maximize rainfall

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STRATEGIC ARENAS: Alignments in our strategies.

areas

Build Assured

Water Supply

Models within the

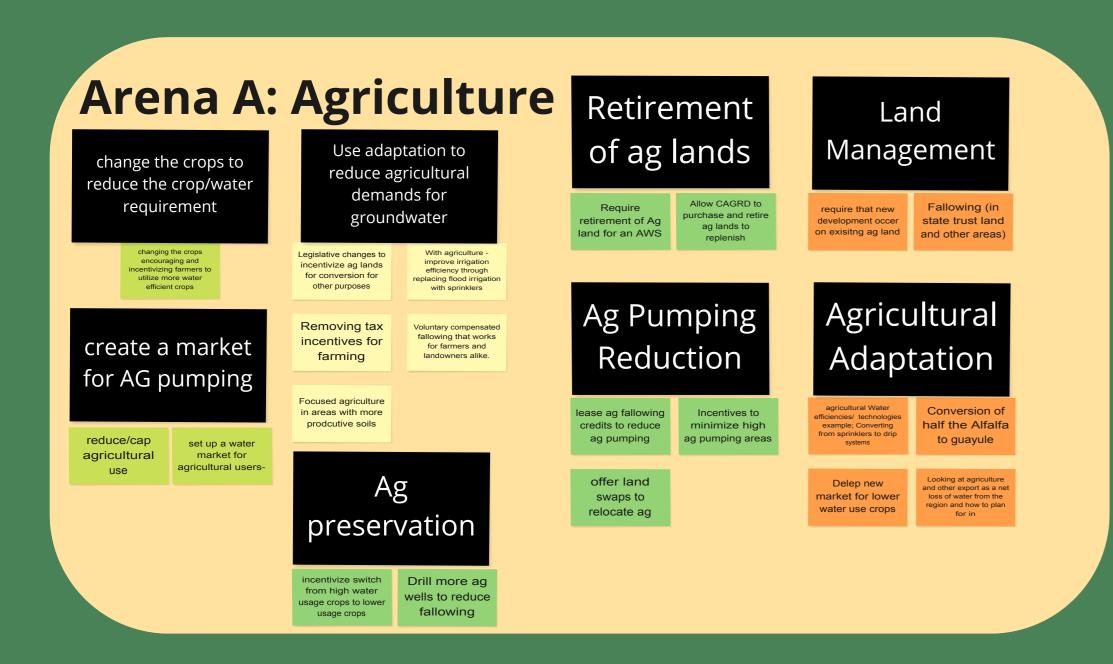
of reclaimed wate

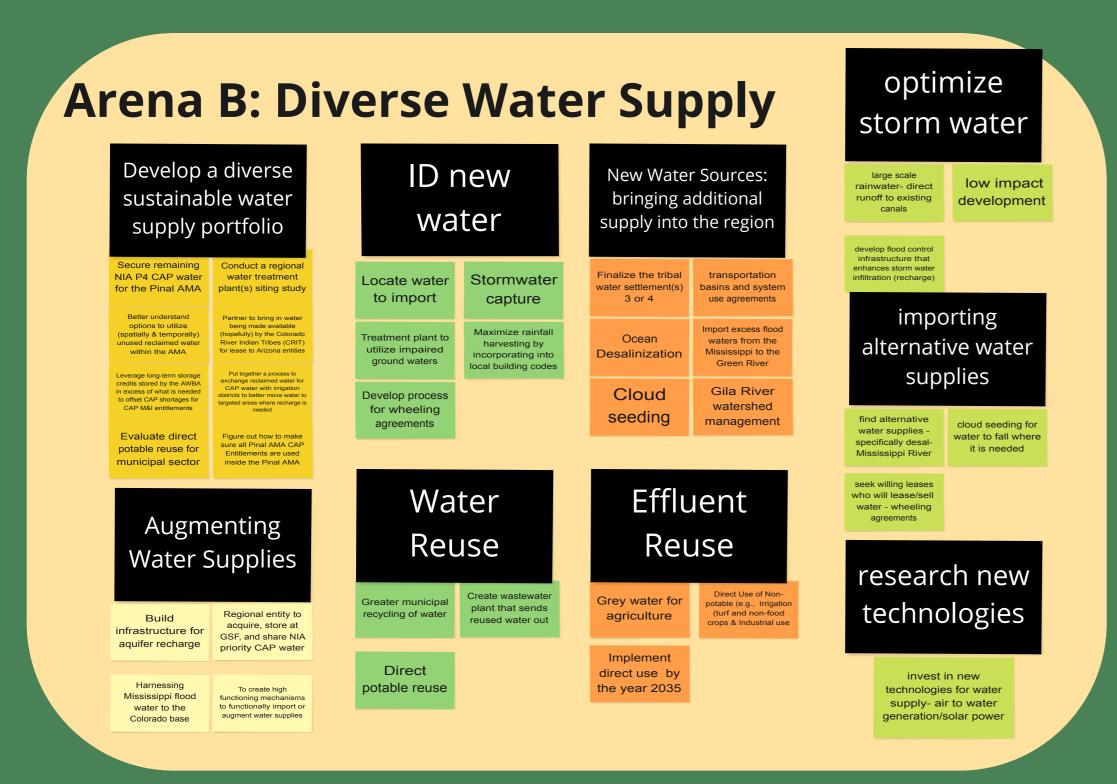
Price water for

what it means to us

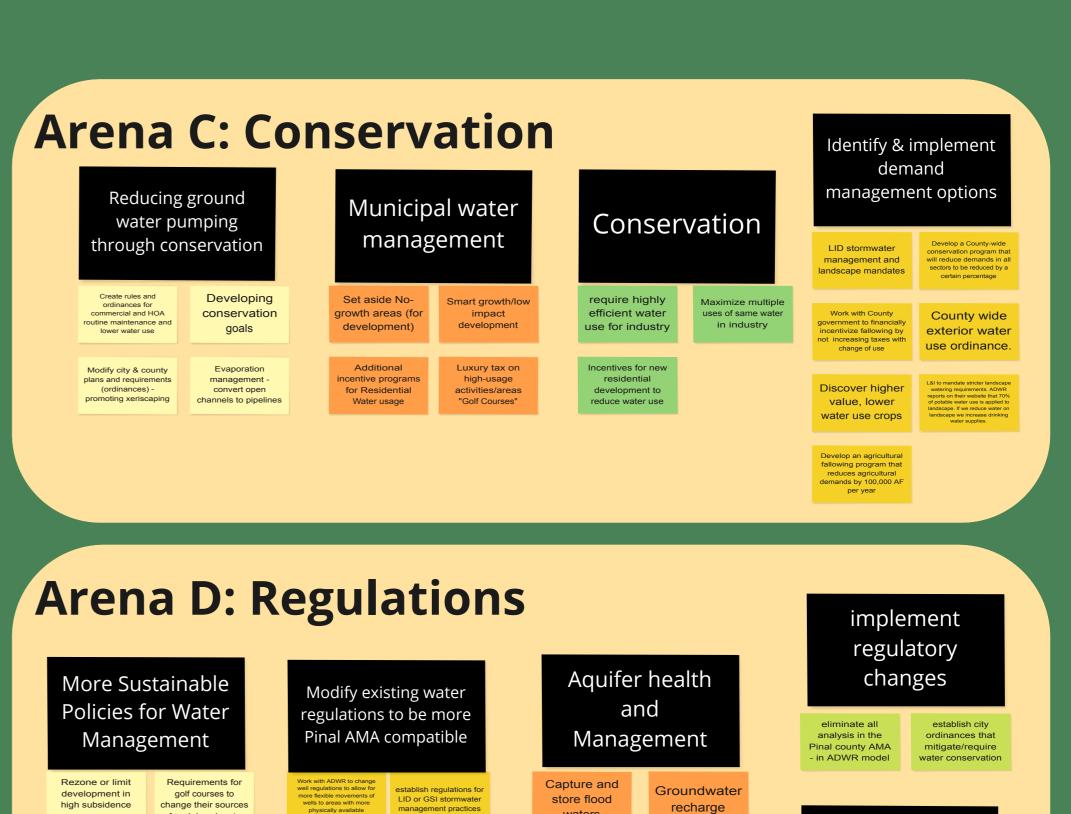
to save up for the

on 10 year cycle to stay current





These arenas were formed from identifying the shared intent among the strategies proposed by the small groups. The arenas were formed around shared themes. Participants then signed up to work on refining these arenas further.



Protection of

stored water

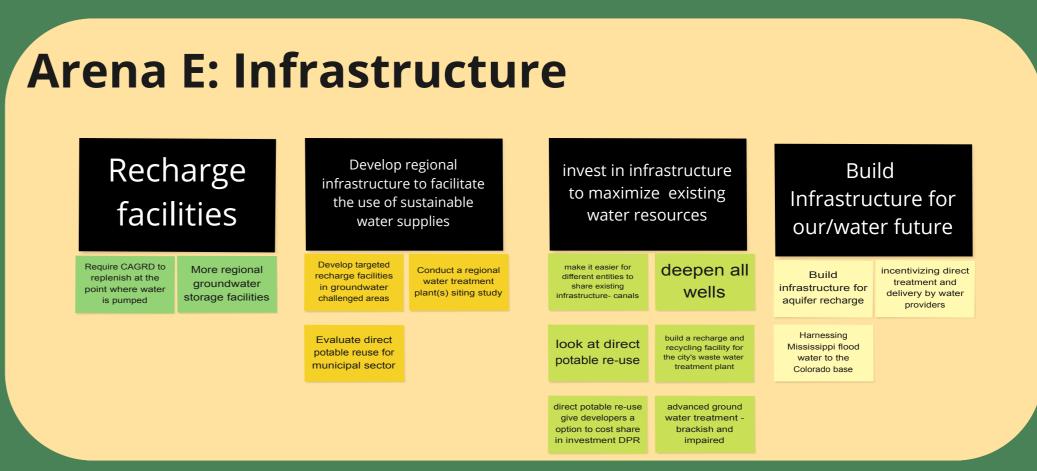
Eliminate 4'

decline criterion

Reduce the

disconnect between

recharge and



Get local

adopt LID code

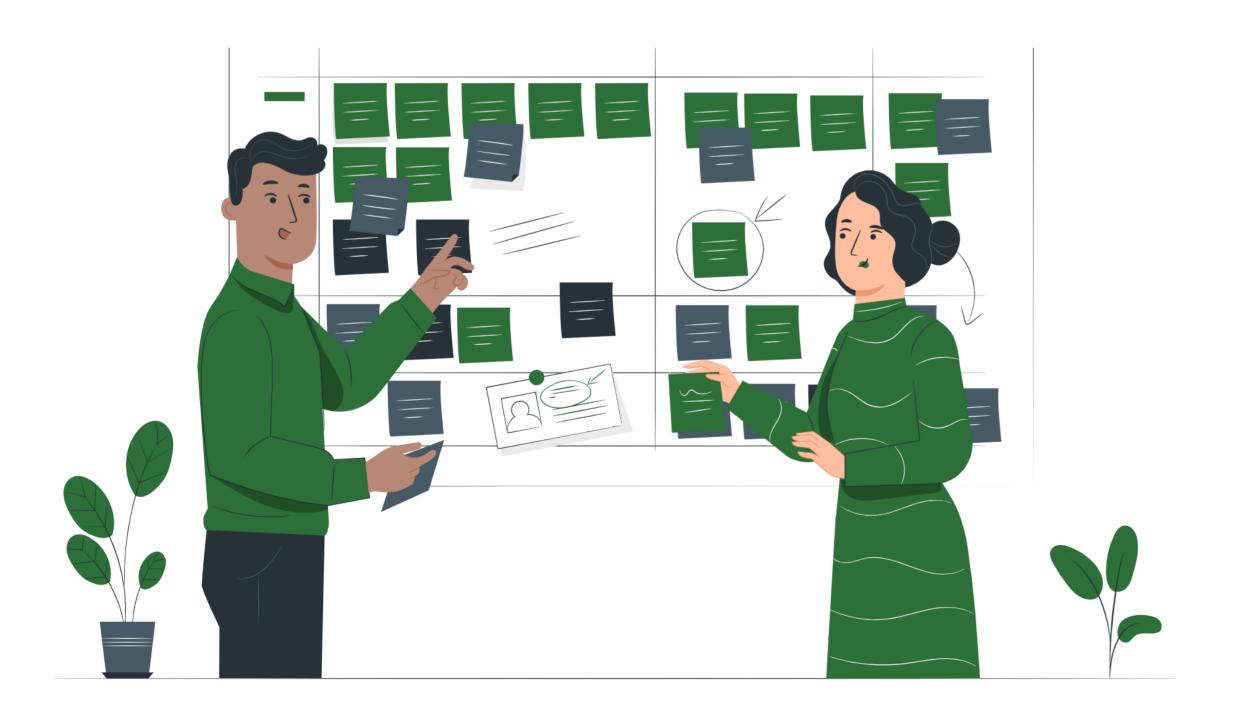
urisdictions to



At Tomorrow's Meeting

We'll work in small groups to refine each arena

- 1. Articulate **3 to 5 clear strategies** that merit pursuit within each arena
- 2. **Analyse & assess feasibility**, desirability and approach to implementation for each strategy
- 3. Explore **next steps** to move these forward



Before you go...

Help us form groups for tomorrow!

Open up the sign in sheet to share your top two choices for strategic arena. (Link in the chat). You'll find space in the right column to enter two letters.

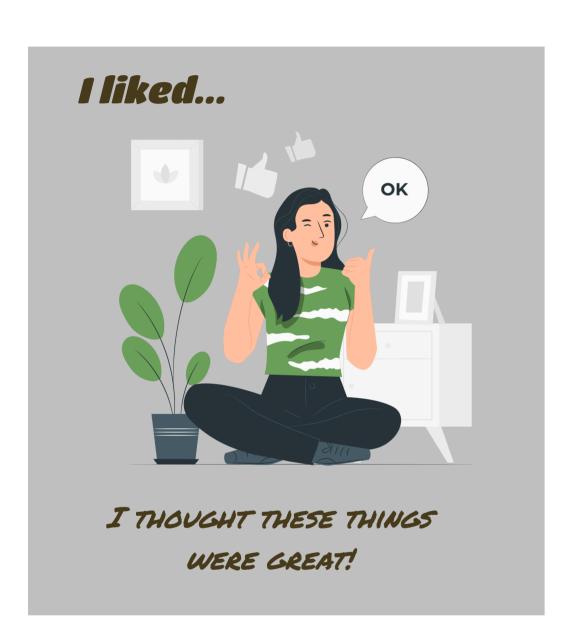
Feel free to reach out to others who would be helpful tomorrow and invite them to join.

R. Policy Stratogics	Arena C: Regional Strategies	
,		
Strategies Arena F: I	Local Infrastructure Strategies	
Email Address	A hope you have for these sessions	Your 2 Arena Choices

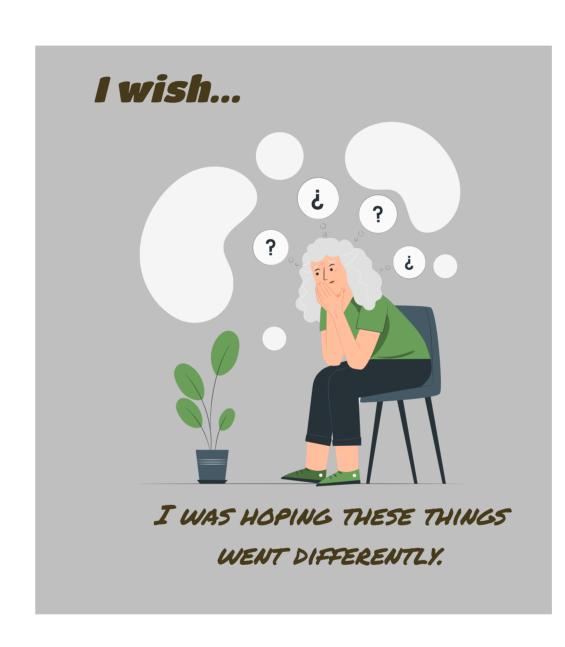
A Reflection Waterfall

We want your feedback on today's session!

Type your response to "I Liked..." in the chat, BUT DON'T HIT RETURN YET!



- Terri Sue Rossi: the virtual board
- Mitch Basefsky: Sharing
- Shaina: good conversations
- Brad Hill: Impressive that you pulled this off virtually!!
- Valerie Swick, Reclamation: Great ideas being considered.
- Shelby Pierce: Group 2- thank you for your willingness to type your ideas into chat! So helpful!
- Fred Schneider: Excellent interaction and participation by everyone.
- Ken Seasholes: The breadth of ideas impressed me
- Jake Lenderking: great ideas! breaktime
- Rachael Mizuno (she/her) to Everyone: Group 3!
- Austin Carey: I enjoyed the opportunity to hear from every member of my group
- Tony Solano: it was great to hear all the ideas from everyone
- Ben Paras: I Liked the various ideas pooled from the breakout groups
- Aaron Dorman: I like the variety of ideas presented and was hoping too late



- Valerie Swick, Reclamation: I look forward to getting into the details tomorrow.
- Ken Seasholes: Process was good;
 I hope participation is expanded tomorrow
- Terri Sue Rossi: More time to see the work of other groups
- Aaron Dorman: I am hoping that people can group these by feasibility, or given valuations by those who affect policy
- Fred Schneider: A little longer break, say 15 minutes
- Ben Paras: I wish there was 1 or 2 more breaks:)
- Shaina: Smooth Miro
- Jake Lenderking: The zooming in and movement of the stickey notes could be improved. It was hard to follow at times